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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,758	07/08/2005	Katsuyoshi Kondoh	12112-0006	3994

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EXAMINER	
ZHU, WEIPING	
ART UNIT	**PAPER NUMBER**
1793	

MAIL DATE	DELIVERY MODE
10/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,758	KONDOH, KATSUYOSHI	
	Examiner	Art Unit	
	Weiping Zhu	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 4-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 1 and 4-7 are currently under examination, wherein claim 1 has been amended in applicant's amendment filed on August 24, 2007. The original claims 2 and 3 have been cancelled in the same amendment.

Applicant's election with traverse of Invention I, Claims 1-7 in the reply filed on August 24, 2007 is acknowledged. The traversal is on the ground(s) that Suzuki (US 3,957,483) does not teach the composite powder of the instant invention, because the coarse particle of Suzuki ('483) is magnesium instead of a magnesium alloy as claimed. This is not found persuasive because Suzuki ('483) discloses forming a magnesium alloy with iron, nickel or copper would greatly enhance the hydrogen generation (col. 1, lines 33-45). Therefore, as stated in the Office action dated April 27, 2007, the magnesium composite powder of Suzuki ('483) is substantially identical to the claimed magnesium composite powder; Inventions I-II lack the same or corresponding special technical features; and unity of invention is lacking.

The requirement is still deemed proper and is therefore made FINAL.

Status of Previous Rejections

2. The previous rejections of claims 1-4 and 7 under 35 U.S.C. 103(a) as being unpatentable over Suzuki ('483) and the previous rejections of claims 5 and 6 under 35 U.S.C. 103(a) as being unpatentable over Suzuki ('483) as applied to the claim 1 above and in view of JP 62-278201 as stated in the Office action dated April 27, 2007 have

been withdrawn in light of the applicant's amendment filed on August 24, 2007. The new grounds of rejections have been set forth as follows.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki ('483) in view of GB 579246.

With respect to claims 1 and 7, Suzuki ('483) discloses a method for producing a magnesium composite having iron, zinc, chromium, aluminum and manganese attached in a finely divided form to the surface of magnesium articles by virtue of application of mechanical pressure (abstract). Suzuki ('483) further discloses that magnesium is in the form of plates, foils and particles and the terms "iron, zinc, chromium, aluminum and manganese" are defined to include their respective oxides in addition to the metals in their pure form (col. 2, lines 16-30).

Suzuki ('483) does not disclose that the finely divided particles comprise a silicon component as claimed in the instant claim 1. GB ('246) discloses alloying magnesium with iron and silicon (lines 53-60, page 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate silicon into the finely divided particles of Suzuki ('483) in order to enhance the hydrogen generation as disclosed by GB ('246) (lines 16-23, page 4).

Suzuki ('483) in view of GB ('246) does not disclose that the finely divided component attached on the surface of magnesium particles reacts with magnesium to form a Mg_2Si particles dispersed in the matrix of the magnesium alloy as claimed in the instant claim 1. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to expect that the same reaction would take place between the silicon of the finely divided particles and the magnesium particles of Suzuki ('483) in view of GB ('246) as the silicon of the fine-grained powder and magnesium alloy coarse particles of the instant application and that the same reaction product would be formed, because the composition of the magnesium composite of Suzuki ('483) in view of GB ('246) is substantially identical to the claimed magnesium composite.

With respect to claims 1 and 4, Suzuki ('483) discloses that the magnesium particles used are not specifically limited in shape (magnesium particles of 50 mesh (353 μm) are used in example 1)) and the metals attached to said magnesium particles are required to be in a finely divided form having a particle diameter not large than 200 mesh (76 μm) (col. 2, lines 31-35). The diameter of the coarse magnesium particles disclosed by Suzuki ('483) is within the claimed range in the instant claim 3 and the range of the fine particles of Suzuki ('483) overlaps the claimed ranges in the instant claims 3 and 4. A prima facie case of obviousness exists. See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art to apply the claimed ranges within the disclosed range of Suzuki ('483), because Suzuki ('483) discloses the same utility over the entire disclosed range. The diameter of the coarse magnesium particles

disclosed by Suzuki ('483) is close enough to the claimed range in the instant claim 4 that one of ordinary skill in the art would expect the same results. See MPEP 2144.05 I.

4. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki ('483) in view of GB ('246) as applied to the claim 1 above and further in view of JP ('201).

With respect to claims 5 and 6, Suzuki ('483) in view of GB ('246) does not disclose that the fine metal particles are attached on the surfaces of the coarse magnesium particles through a binder and oil as claimed.

JP ('201) discloses a method for attaching fine metallic particles to coarse particles through a binder and oil (left col. 2nd and 3rd paragraphs, page 5, orally translated by an USPTO translator).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the fine metal particles to the surface of the coarse magnesium particles through a bind and oil in the process of Suzuki ('483) in view of GB ('246) as disclosed by JP (201) in order to attach the fine metallic particles to the coarse particles uniformly as discloses by JP ('201) (right col., 1st paragraph, page 4, orally translated by an USPTO translator).

Response to Arguments

5. The applicant's arguments filed on August 24, 2007 have been fully considered but they are moot in light of the new ground of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZ

10/15/2007

ROY KING
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